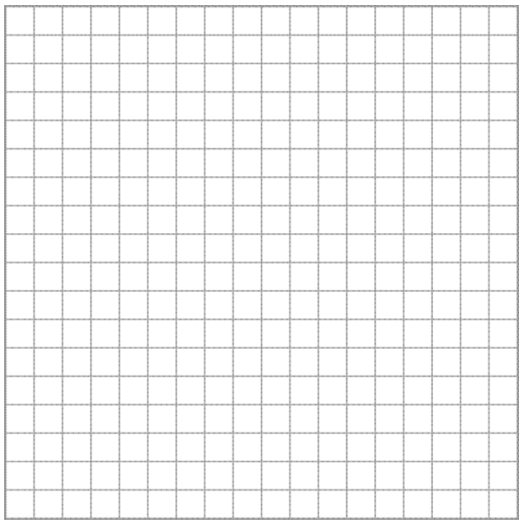
Algebraic Concepts
Lesson 22 Worksheet
Math for Standards

Name _____

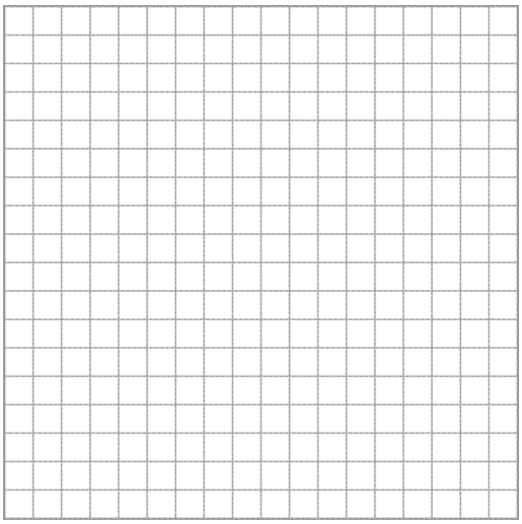
Date _____

For each question, you need to find the answer and show your work. Each problem is worth 3 points: one for the correct answer and two for showing your work. For some problems, you may just need to write out how you know you have the correct answer.

1. Graph $y < 3x$.



2. Graph $x \leq 4$.



3. Matt Mitarnowski takes a bus and then a train to school. The total trip never takes more than 45 minutes, but the length of time on either part varies. Write an inequality to model the relationship. Then find two possible solutions.

4. A club is ordering tickets to a football game. The club is buying two types of seats: reserved seats and box seats. They want to buy fewer than 100 in all. Write an inequality to model the relationship. Then find two possible solutions.

5. Which of the following is *not* a solution to the inequality $x + y \leq 50$. More than one of these may not be solutions.

a. $(20, 30)$

b. $(21, 15)$

c. $(27, 22)$

d. $(30, 22)$

6. Find all possible solutions for $\frac{x}{2} - 9 > 23$.

7. Which of the following could be solutions to the inequality $xy > -20$? More than one of these may be a solution.

a. $(-3, 7)$

b. $(-2, -10)$

c. $(4, -5)$

d. $(11, 2)$

8. Find all possible solutions for $x - 7 < -3$.

Open-Ended Question: Make sure as you answer the open-ended question that you show your work AND explain how you know you are doing the correct work. YOU MUST EXPLAIN WHAT YOU ARE DOING!!!

Homework *exercises* take you 5 minutes each. Homework *problems* take you 15 minutes each. You work for no more than 1 hour in all.

A. Write an inequality to represent the given information. Be sure that you are working with the same units on both sides of the inequality, either minutes or hours.

B. If you use exactly the entire hour, how many possible combinations of exercises and problems can you do? List them.